

Stage-Flow Asymmetry Timing Difference

between maximum/minimum stage inside inundated area and flow direction change in channel directly outside breached area

Breach Scenario	Inundated Area (acres)	Asymmetry in timing (min)
Van Sickle Base ¹	0	75.0
Van Sickle Narrow	200	75.0
	500	71.3
	987	56.3
	2168	3.8
	2961	-22.5
Van Sickle Wide	500	78.8
	1000	67.5
	2000	71.3
	3000	71.3
Grizzly Base ¹	0	78.8
Grizzly Narrow	200	82.5
	500	86.3
	1000	75.0
	2000	3.8
	3000	-52.5
Grizzly Wide	200	86.3
	500	93.8
	1000	108.8
	2000	161.3
	3000	191.3

¹ Asymmetry in timing for base cases refers to stage-flow asymmetry in channel outside area to be breached.